

Appendix 7

Weather Analysis Checklist – IFR Flight

Ceiling and Visibility

- ✓ Is the forecast ceiling for my estimated time of arrival high enough to make the approach?
- ✓ What visibility can I expect for each phase of flight (departure, enroute, destination)?
 - Will I have enough visibility to legally make an instrument approach at the destination?
 - Do current or forecast ceiling and visibility conditions require me to select and file an alternate? (1-2-3 rule.)
 - Where is the nearest GOOD weather alternative?
- ✓ How do reported and forecast conditions for ceiling and visibility compare with my personal minimums for IFR?

Aircraft Performance

- ✓ Given temperature, altitude, density altitude, and aircraft loading, what is the expected aircraft performance?
 - Takeoff distance
 - Time & distance to climb
 - Cruise performance
 - Landing distance
- ✓ Are these performance values sufficient for the runways to be used and the terrain to be crossed on this flight?

(Remember that it is always good practice to add a 50% to 100% safety margin to the "book numbers" you derive from the charts in the aircraft's approved flight manual (AFM)).
- ✓ Will weight restrictions allow me to carry more than the normal fuel reserve?

(More fuel means that you have more options to escape weather.)
- ✓ *Icing.* What is the forecast freezing level for this flight?
 - Are there any pilot reports (PIREPS) for my route, or points on the route that support or rebut the icing forecast?
 - Where are the cloud bases and cloud tops?

Turbulence

- ✓ Are the wind conditions at the departure and destination airports within the gust and crosswind capabilities of both the pilot and aircraft?
- ✓ What is the maneuvering speed (V_A) for this aircraft at the expected weight?

(Remember that V_A is lower if you are flying at less than maximum gross weight.)
- ✓ *Thunderstorms.* Does the forecast include convective activity at any point along my proposed route?

IFR Analysis Worksheet		Turbulence	Ceiling & Visibility			Visibility & Performance	Trends
Place	Time	Wind	Visibility	Weather	Ceiling	Temp/Dewpt	Altimeter

Turbulence Analysis

Ceiling and Visibility Analysis

Performance Analysis

**Nearest
VFR
Weather**

Direction:
N S E W

Distance:
____ nm

Flying time to
nearest good
VFR: _____

Personal Minimums:

Wind speed = _____

Gust factor = _____

Crosswind = _____

Departure wind = _____ @ _____

Destination wind = _____ @ _____

En route wind = _____ @ _____

Maneuvering speed = _____ *

T-storms forecast? Yes ☐ No ☐

Convective SIGMETs? Yes ☐ No ☐

* V_A decreases as weight decreases

Personal IFR Approach Minimums:

Ceiling = _____

Visibility = _____

Planned altitude = _____
- Lowest en route ceiling = _____ } ground clearance

Planned altitude = _____
- Highest en route obstacle = _____ } clearance

Planned altitude = _____
- Highest en route terrain = _____ } clearance

Cloud bases = _____ Cloud tops = _____

Alternate required ? Yes ☐ No ☐

Over mountainous terrain ? Yes ☐ No ☐

Over large bodies of water ? Yes ☐ No ☐

Departure visibility = _____

Lowest en route visibility = _____

Destination visibility = _____

Density altitude = _____

Freezing level = _____

Takeoff distance = _____

Runway length = _____

Landing distance = _____

Runway length = _____

Cruise performance = _____

Fuel available = _____ gal _____ hrs

Fuel required = _____ gal _____ hrs

Fuel reserve = _____ gal _____ hrs

Note: It is good practice to add a 50% to 100% safety margin to the "book numbers" you derive from charts in the approved flight manual (AFM).